

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No. 09/894,122
Attorney Docket No. Q65178

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A gain control amplification circuit ~~arranged in a transmission circuit for a terminal equipment in a radio communication system which executes communication between a base station and the terminal equipment~~, comprising:

a gain control amplification section having gain control amplifiers of at least two stages ~~whose gains are respectively controlled~~; and

control means for controlling said gain control amplifiers,

wherein said gain control amplifiers are individually controlled by said control means to set a transmission output value from the terminal equipment to a predetermined value on the basis of a reception level of a reception signal transmitted from the base station and received by the terminal equipment; and

wherein said control means comprises a determination circuit for determining an intensity of the reception signal, an adder for calculating a control signal on the basis of a determination result from said determination circuit, and a control voltage generation circuit for controlling said gain control amplifiers on the basis of the control signal.

2. (canceled).

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3. (canceled).

4. (canceled).

5. (canceled).

6. (canceled).

7. (currently amended): A The circuit according to claim 4 1, characterized in that of wherein said gain control amplifiers are of two IF-GCA and RF-GCA stages, a range of a gain control amplifier at a latter stage is set wider than that at a former stage.

8. (currently amended): A The circuit according to claim 5 1, wherein out of said gain control amplifiers of two stages, a range of a gain control amplifier at a latter stage is set wider than that at a former stage.

9. (canceled).

10. (currently amended): A The circuit according to claim 4 1, wherein when the transmission output is to be reduced, the gain of a gain control amplifier at a latter stage is reduced first.

11. (canceled).

12. (canceled).

13. (canceled).

14. (currently amended): A The circuit according to claim 6 1, wherein said control voltage generation circuit is a linear interpolation circuit.

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15. (currently amended): A The circuit according to claim 14, wherein a predetermined portion of a linear characteristic in said linear interpolation circuit is used by each of said gain control amplifiers.

16. (currently amended): A The circuit according to claim 15, wherein the predetermined portion of the linear characteristic in said linear interpolation circuit is set on the basis of an SNR of the transmission output.

17. (currently amended): A The circuit according to claim 14, wherein said linear interpolation circuit stores a conversion value between a level of the reception signal and a gain corresponding to the level.

18. (canceled).

19. (canceled).

20. (currently amended): A The circuit according to claim 2 1, wherein said gain control amplifiers of two stages are arranged on an input side (former stage) and an output side (latter stage) of an up converter in the transmission circuit.

21. (canceled).

22. (canceled).

23. (currently amended): A The circuit according to claim 2 1, wherein said gain control amplifiers comprise at least three stages.

24. (canceled).

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25. (canceled).

26. (currently amended): A The circuit according to claim 3 1, wherein the radio communication system uses a CDMA (Code Division Multiple Access) scheme.

27. (canceled).

28. (canceled).

29. (canceled).

30. (canceled).

31. (currently amended): A terminal equipment in a radio communication system, which has a reception circuit for receiving a transmission signal from a base station, and a transmission circuit for transmitting a signal to the base station so as to communicate with the base station, comprising:

a gain control amplification circuit having a gain control amplification section in which gain control amplifiers of at least two stages are arranged; and

control means for individually controlling said gain control amplifiers,

wherein said gain control amplifiers are individually controlled by said control means to set a transmission output value from said terminal equipment to a predetermined value on the basis of a reception level of a reception signal transmitted from the base station and received by said terminal equipment, and

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wherein said control means comprises a determination circuit for determining an intensity of the reception signal, an adder for calculating a control signal on the basis of a determination result from said determination circuit, and a control voltage generation circuit for controlling said gain control amplifiers on the basis of the control signal.